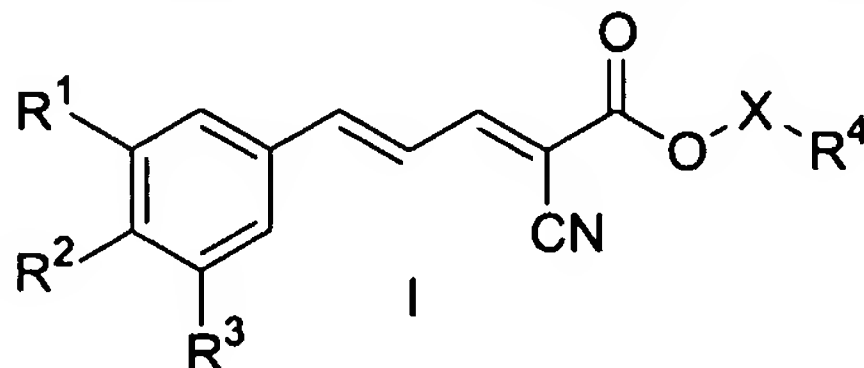


**AMENDMENTS TO THE CLAIMS**

1. (Original) A compound of Formula I, or a salt, solvate, or hydrate thereof



wherein

$R^1$ ,  $R^2$  and  $R^3$  are each independently selected from H, OH,  $C_{1-6}$ alkyl,  $C_{1-6}$ alkoxy,  $C_{1-6}$ alkylCO<sub>2</sub>, NH<sub>2</sub>, NH- $C_{1-6}$ alkyl, N( $C_{1-6}$ alkyl)( $C_{1-6}$ alkyl),  $C_{1-6}$ alkyl(C=O)NH,  $C_{1-6}$ alkyl(C=O)N( $C_{1-6}$ alkyl), SH, S- $C_{1-6}$ alkyl, NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub> and halo;

$R^4$  is unsubstituted Ar, or Ar substituted with 1-4 substituents, independently selected from  $C_{1-6}$ alkyl,  $C_{1-6}$ alkoxy, and halo;

X is selected from (CH<sub>2</sub>CH<sub>2</sub>O)<sub>n</sub> and (CH<sub>2</sub>)<sub>n</sub>, and

n = 1-4.

2. (Original) The compound according to claim 1, wherein

$R^1$ ,  $R^2$  and  $R^3$  are each independently selected from H, OH,  $C_{1-4}$ alkyl,  $C_{1-4}$ alkoxy,  $C_{1-4}$ alkylCO<sub>2</sub>, NH<sub>2</sub>, NH- $C_{1-4}$ alkyl, N( $C_{1-4}$ alkyl)( $C_{1-4}$ alkyl),  $C_{1-4}$ alkyl(C=O)NH,  $C_{1-4}$ alkyl(C=O)N( $C_{1-4}$ alkyl), NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub>, and halo;

$R^4$  is  $C_{1-6}$ alkyl,

X is (CH<sub>2</sub>CH<sub>2</sub>O)<sub>n</sub>, and

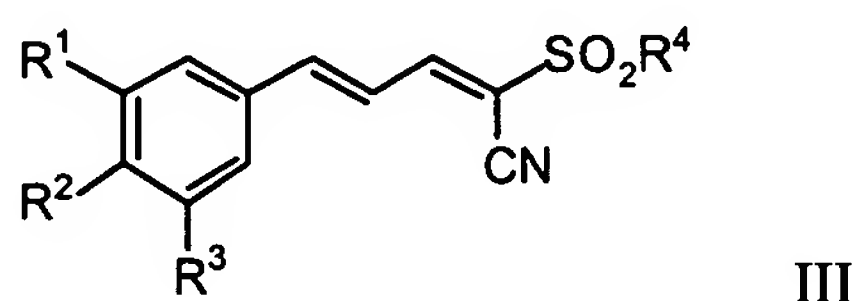
n = 1-4.

3. (Original) The compound according to claim 1 or 2, wherein  $R^1$ ,  $R^2$ , and  $R^3$  are each independently selected from H, OH,  $C_{1-4}$ alkyl,  $C_{1-4}$ alkoxy,  $C_{1-4}$ alkyl(CO)O, NH<sub>2</sub>, NH- $C_{1-4}$ alkyl, N( $C_{1-4}$ alkyl)( $C_{1-4}$ alkyl),  $C_{1-4}$ alkyl(C=O)NH,  $C_{1-4}$ alkyl(C=O)N( $C_{1-4}$ alkyl), NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub>, and halo.

4. (Original) The compound according to claim 3, wherein  $R^1$ ,  $R^2$  and  $R^3$  are each independently selected from H, OH, OCH<sub>3</sub>, CH<sub>3</sub>CO<sub>2</sub>, NH<sub>2</sub>, N(CH<sub>3</sub>)<sub>2</sub>, CH<sub>3</sub>CONH, and NO<sub>2</sub>.

5. (Original) The compound according to claim 4, wherein  $R^1$ ,  $R^2$ , and  $R^3$  are each independently selected from H, OH, and  $OCH_3$ .
6. (Original) The compound according to claim 1, wherein  $R^4$  is unsubstituted Ar.
7. (Original) The compound according to claim 6, wherein  $R^4$  is phenyl.
8. (Original) The compound according to claim 2, wherein  $R^4$  is methyl or ethyl.
9. (Original) The compound according to claim 8, wherein  $R^4$  is methyl.
10. (Original) The compound according to claim 9, wherein n is 2-3.
11. (Original) The compound according to claim 10, wherein n is 3.
12. (Original) A compound selected from:
  - 2-Cyano-5-(4-hydroxy-3,5-dimethoxyphenyl)-penta-2E,4E-dienoic acid benzyl ester (CRIX-38)
  - 2-Cyano-5-(3,4-dihydroxyphenyl)-penta-2E,4E-dienoic acid benzyl ester (CRIX-39)
  - 2-Cyano-5-(3,4-dihydroxyphenyl)-penta-2E,4E-dienoic acid 2-[2-(2-methoxyethoxy)ethoxy]ethyl ester (CRIV-42)
  - 2-Cyano-5-(4-hydroxy-3,5-dimethoxyphenyl)-penta-2E,4E-dienoic acid 2-[2-(2-methoxyethoxy)ethoxy]ethyl ester (CRIV-46); and
  - 2-Cyano-5-(4-hydroxy-3-methoxyphenyl)-penta-2E,4E-dienoic acid benzyl ester (CRIX-79).
13. (Currently Amended) A composition comprising a compound according to ~~any one of~~ claims 1 ~~to 12~~ in admixture with a pharmaceutically acceptable diluent or carrier.
- 14-16. (Cancelled).
17. (Currently Amended) A method of modulating cell proliferation comprising administering an effective amount of a compound according to ~~any of~~ claims 1 ~~to 12~~, and/or a composition according to claim 13, to a cell or animal in need thereof.

18. (Original) The method according to claim 17, for inhibiting cell proliferation.
19. (Original) The method according to claim 18 wherein the cell is a malignant hematopoietic cell.
20. (Original) A compound of Formula III, or a salt, solvate, or hydrate thereof:

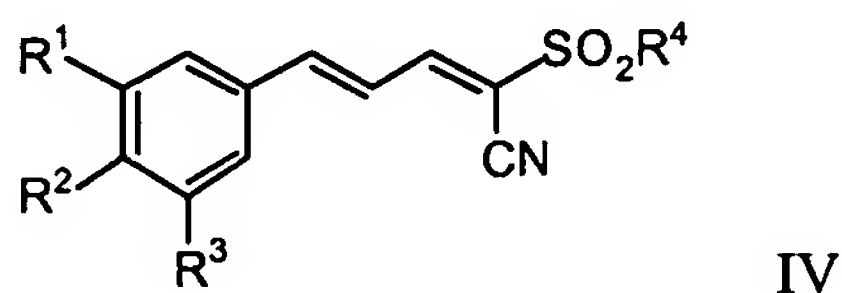


wherein

- $R^1$ ,  $R^2$  and  $R^3$  are each independently selected from H, OH,  $C_{1-6}$ alkyl,  $C_{1-6}$ alkoxy,  $C_{1-6}$ alkylCO<sub>2</sub>, NH<sub>2</sub>, NH- $C_{1-6}$ alkyl, N( $C_{1-6}$ alkyl)( $C_{1-6}$ alkyl),  $C_{1-6}$ alkyl(C=O)NH,  $C_{1-6}$ alkyl(C=O)N( $C_{1-6}$ alkyl), SH, S- $C_{1-6}$ alkyl, NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub>, and halo; and
- $R^4$  is selected from  $C_{1-6}$ alkyl, phenyl and pyridyl, wherein phenyl and pyridyl are unsubstituted or substituted with 1-4 substituents, independently selected from  $C_{1-6}$ alkyl,  $C_{1-6}$ alkoxy and halo, with the provisos that when  $R^1$  and  $R^3$  are both H and  $R^4$  is unsubstituted phenyl,  $R^2$  is not H, Cl, or OCH<sub>3</sub>; when  $R^1$  and  $R^2$  are both H and  $R^4$  is unsubstituted phenyl,  $R^3$  is not NO<sub>2</sub>; and when  $R^1$  and  $R^3$  are both H and  $R^4$  is CH<sub>3</sub>,  $R^2$  is not N(CH<sub>3</sub>)<sub>2</sub>.

21. (Original) The compound according to claim 1, wherein  $R^1$ ,  $R^2$  and  $R^3$  are each independently selected from H, OH,  $C_{1-4}$ alkyl,  $C_{1-4}$ alkoxy,  $C_{1-4}$ alkylCO<sub>2</sub>, NH<sub>2</sub>, NH- $C_{1-4}$ alkyl, N( $C_{1-4}$ alkyl)( $C_{1-4}$ alkyl),  $C_{1-4}$ alkyl(C=O)NH,  $C_{1-4}$ alkyl(C=O)N( $C_{1-4}$ alkyl), NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub>, and halo.
22. (Original) The compound according to claim 21,  $R^1$ ,  $R^2$  and  $R^3$  are each independently selected from H, OH, OCH<sub>3</sub>, CH<sub>3</sub>CO<sub>2</sub>, NH<sub>2</sub>, N(CH<sub>3</sub>)<sub>2</sub>, CH<sub>3</sub>CONH, and NO<sub>2</sub>.
23. (Original) The compound according to claim 20, wherein  $R^4$  is selected from  $C_{1-4}$ alkyl, phenyl, and pyridyl.
24. (Original) The compound according to claim 23, wherein  $R^4$  is selected from CH<sub>3</sub> and phenyl.

25. (Original) The compound according to claim 24, wherein  $R^4$  is unsubstituted phenyl.
26. (Original) The compound according to claim 20, wherein phenyl and pyridyl are unsubstituted or substituted with 1-3 substituents, independently selected from  $C_{1-4}$ alkyl,  $C_{1-4}$ alkoxy, and halo.
27. (Original) The compound according to claim 24, wherein phenyl is unsubstituted or substituted with 1-2 substituents, independently selected from  $C_{1-4}$ alkyl,  $C_{1-4}$ alkoxy, and halo.
28. (Original) The compound according to claim 20, wherein at least one of  $R^1$ ,  $R^2$  and  $R^3$  is OH while  $R^4$  is selected from unsubstituted phenyl and phenyl substituted with 1-4 substituents, independently selected from  $C_{1-6}$ alkyl,  $C_{1-6}$ alkoxy, and halo.
29. (Original) A compound selected from:  
2-Benzenesulfonyl-5-(3,4-dihydroxyphenyl)-penta-2E,4E-dienenitrile (CRVIII-33),  
2-Benzenesulfonyl-5-(4-hydroxy-3,5-dimethoxyphenyl)-penta-2E,4E-dienenitrile (CRVIII-34),  
2-Benzenesulfonyl-5-(4-nitrophenyl)-penta-2E,4E-dienenitrile (CRVIII-35),  
5-(4-Acetoxy-3-methoxyphenyl)-2-benzenesulfonyl-penta-2E,4E-dienenitrile (CRVIII-49)  
5-(3,4-Dihydroxyphenyl)-2-(pyridine-2-sulfonyl)-penta-2E,4E-dienenitrile (CRVIII-50),  
2-(4-Chlorobenzenesulfonyl)-5-(3,4-dihydroxyphenyl)-penta-2E,4E-dienenitrile (CRVIII-51),  
5-(3,4-Dihydroxyphenyl)-2-(toluene-4-sulfonyl)-penta-2E,4E-dienenitrile (CRVIII-52), and  
5-(3,4-Dihydroxyphenyl)-2-methanesulfonyl-penta-2E,4E-dienenitrile (CRVIII-53).
30. (Currently Amended) A composition comprising a compound according to ~~any one of~~ claims 20 to 29 in admixture with a pharmaceutically acceptable diluent or carrier.
31. (Original) A composition comprising, in admixture with a pharmaceutically acceptable diluent or carrier, a compound of Formula IV, or a salt, solvate, or hydrate thereof

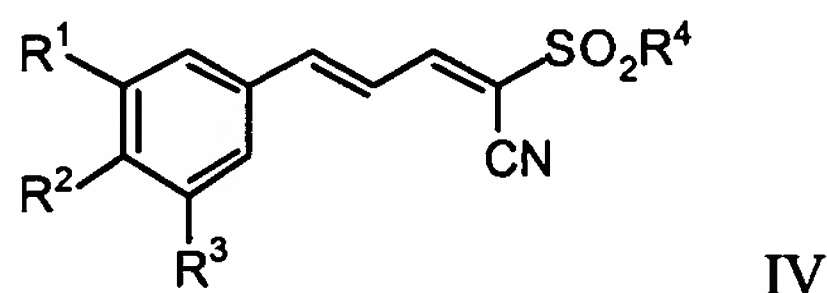


wherein

$R^1$ ,  $R^2$  and  $R^3$  are each independently selected from H, OH,  $C_{1-6}$ alkyl,  $C_{1-6}$ alkoxy,  $C_{1-6}$ alkylCO<sub>2</sub>, NH<sub>2</sub>, NH- $C_{1-6}$ alkyl, N( $C_{1-6}$ alkyl)( $C_{1-6}$ alkyl),  $C_{1-6}$ alkyl(C=O)NH,  $C_{1-6}$ alkyl(C=O)N( $C_{1-6}$ alkyl), SH, S- $C_{1-6}$ alkyl, NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub>, and halo; and  $R^4$  is selected from  $C_{1-6}$ alkyl, phenyl and pyridyl, wherein phenyl and pyridyl are unsubstituted or substituted with 1-4 substituents, independently selected from  $C_{1-6}$ alkyl,  $C_{1-6}$ alkoxy, and halo.

32-34. (Cancelled).

35. (Currently Amended) A method of modulating cell proliferation comprising administering to a cell or animal in need thereof an effective amount of a composition according to ~~any of claims 30 and or 31, and/or~~ a compound capable of modulating cell proliferation of Formula IV, or a salt, solvate or hydrate thereof:



wherein

$R^1$ ,  $R^2$  and  $R^3$  are each independently selected from H, OH,  $C_{1-6}$ alkyl,  $C_{1-6}$ alkoxy,  $C_{1-6}$ alkylCO<sub>2</sub>, NH<sub>2</sub>, NH- $C_{1-6}$ alkyl, N( $C_{1-6}$ alkyl)( $C_{1-6}$ alkyl),  $C_{1-6}$ alkyl(C=O)NH,  $C_{1-6}$ alkyl(C=O)N( $C_{1-6}$ alkyl), SH, S- $C_{1-6}$ alkyl, NO<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub>, and halo; and  $R^4$  is selected from  $C_{1-6}$ alkyl, phenyl and pyridyl, wherein phenyl and pyridyl are unsubstituted or substituted with 1-4 substituents, independently selected from  $C_{1-6}$ alkyl,  $C_{1-6}$ alkoxy, and halo.

36. (Original) The method according to claim 35, for inhibiting cell proliferation.

37. (Original) The method according to claim 36, wherein the cell is a malignant hematopoietic cell.